

What is claimed is:

1. A nonwoven fabric for loop material of hook-and-loop fastener, characterized in that:

5 said nonwoven fabric for loop material of hook-and-loop fastener is formed by laminating and joining together a nonwoven fabric base composed of thermoplastic filaments A, in which heat-bonded portions formed by heat-bonding the thermoplastic filaments A together by softening or melting the thermoplastic filaments A are dispersed, and a  
10 filamentous web composed of thermoplastic filaments B;

said nonwoven fabric for loop material of hook-and-loop fastener has a loop side in which some parts of the thermoplastic filaments B pass through the nonwoven fabric base and form loops on a surface of the nonwoven fabric base;

15 said thermoplastic filaments A and said thermoplastic filaments B are entangled with each other; and

said thermoplastic filaments B are not substantially fixed to each other on a non-loop side opposite to the loop side.

20 2. The nonwoven fabric for loop material of hook-and-loop fastener according to claim 1:


wherein said nonwoven fabric for loop material of hook-and-loop fastener has thermally-press-joined areas combined said filamentous web and said nonwoven fabric base  
25 by softening or melting the thermoplastic filaments A and the thermoplastic filaments B, and areas not thermally-press-joined, in which said filamentous web and said nonwoven fabric base are not combined by softening or melting the thermoplastic filaments A and the thermoplastic  
30 filaments B;

a surface of said areas not thermally-press-joined serves as the loop side; and

a surface of said thermally-press-joined areas does not serve as the loop side.

5           3. The nonwoven fabric for loop material of hook-and-loop fastener according to claim 2, wherein said nonwoven fabric for loop material of hook-and-loop fastener has plural areas not thermally-press-joined and the thermally-press-joined areas surrounding each individual  
10   area not thermally-press-joined.

          4. The nonwoven fabric for loop material of hook-and-loop fastener according to claim 3, wherein size of each individual area not thermally-press-joined is not less than  $5\text{mm}^2$ , and gross size occupied by the areas not  
15   thermally-press-joined is in the range of 40 to 90% of the whole surface size.

 20       5. The nonwoven fabric for loop material of hook-and-loop fastener according to any of claims 1 to 4, wherein the thermoplastic filament A and/or B is sheath-core type conjugate filament composed of a high melting point core component and a low melting point sheath component.

          6. A manufacturing process of the nonwoven fabric for loop material of hook-and-loop fastener described in claim 1, characterized by the steps of:

25           laminating together a nonwoven fabric base composed of thermoplastic filaments A, in which heat-bonded portions formed by heat-bonding the thermoplastic filaments A together by softening or melting the thermoplastic filaments A are dispersed, and a filamentous web composed of  
30   thermoplastic filaments B;

applying a needle punching to the laminate from said filamentous web side so that some parts of said thermoplastic filaments B may pass through said nonwoven fabric base side and form loops on a surface of said nonwoven fabric base, thereby forming a loop side and entangling said thermoplastic filaments A and said thermoplastic filaments B with each other.

7. A manufacturing process of the nonwoven fabric for loop material of hook-and-loop fastener described in claim 2, characterized by the steps of:

laminating together a nonwoven fabric base composed of thermoplastic filaments A, in which heat-bonded portions formed by heat-bonding the thermoplastic filaments A together by softening or melting the thermoplastic filaments A are dispersed, and a filamentous web composed of thermoplastic filaments B;

applying a needle punching to the laminate from said filamentous web side so that some parts of said thermoplastic filaments B may pass through said nonwoven fabric base side and form loops on a surface of said nonwoven fabric base, thereby forming a loop side and entangling said thermoplastic filaments A and said thermoplastic filaments B with each other; and

passing the laminated nonwoven fabric base and filamentous web through between a heated engraved roller and a flat roller so that said nonwoven fabric base side comes in contact with the heated engraved roller and said filamentous web side comes in contact with the flat roller, thereby providing a thermally-press-joined areas formed by heat-pressing said filamentous web and said nonwoven fabric

base and areas not thermally-press-joined in which said filamentous web and said nonwoven fabric base are not heat-pressed, and utilizing the surface of said areas not thermally-press-joined as a loop side.

5           8. The manufacturing process of the nonwoven fabric for loop material of hook-and-loop fastener according to claim 7, wherein an engraved roller having plural engraved parts and non-engraved parts surrounding said engraved parts is used, and plural areas not thermally-press-joined and  
10 the thermally-press-joined areas surrounding each individual area not thermally-press-joined are provided.

          9. A nonwoven fabric for loop material of hook-and-loop fastener composed of thermoplastic filaments B, said thermoplastic filaments B being entangled with each other,  
15 characterized in that:

          said nonwoven fabric for loop material of hook-and-loop fastener has plural areas not thermally-press-bonded in which said thermoplastic filaments B are not heat-bonded together and a continuous thermally-press-bonded area  
20 surrounding each individual area not thermally-press-bonded, and in which said thermoplastic filaments B are heat-bonded together:

          a surface of said areas not thermally-press-bonded serves as a loop side having loops formed of said thermoplastic  
25 filaments B; and

          said thermoplastic filaments B are not substantially fixed to each other on a non-loop side opposite to said loop side.

          10. The nonwoven fabric for loop material of  
30 hook-and-loop fastener according to claim 9, wherein size

of each individual area not thermally-press-bonded is at least  $5\text{mm}^2$  and the gross size occupied by said area not thermally-press-bonded is in the range of 40 to 90% of the whole surface size.

5        11. The manufacturing process of the nonwoven fabric for loop material of hook-and-loop fastener described in claim 9, characterized by the steps of:

applying needle punching to a filamentous web composed of the thermoplastic filaments B, thereby entangling said  
10 thermoplastic filaments B with each other;

forming plural loops on a surface of said filamentous web using some parts of said thermoplastic filaments B;

passing said filamentous web through between a heated engraved roller and a flat roller so that a side where loops  
15 are formed comes in contact with a heated engraved roller having plural engraved parts and a continuous non-engraved part surrounding each individual engraved part and a side where loops are not formed comes in contact with said flat  
roller, thereby providing a thermally-press-bonded area in  
20 which thermoplastic filaments B are heat-bonded together and areas not thermally-press-bonded where said thermoplastic filaments B are not heat-bonded together; and

utilizing the surface of said areas not thermally-press-bonded as a loop side.